



Post Office Box 482
Fort Worth, Texas 76101

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April 10, 2006

Mr. Fidel Ballesteros
Sr. ASI, MIDO-42
Federal Aviation Administration
2610 Meacham Blvd.
Ft. Worth, Texas 76913

Dear Mr. Ballesteros,

This letter is to advise that Bell Helicopter Textron has determined that the TR918 Unmanned Aerial Vehicle, registration number N5916A, serial number 91801, that impacted the ground on April 5, 2006, is not repairable and no longer meets airworthiness status.

Per your instructions, I am providing the Experimental Airworthiness Certificate along with the FAA issued Experimental Operating Limitations for your disposition.

Sincerely,

A handwritten signature in cursive script that reads "Mary Anne Brooks".

Mary Anne Brooks
UAS Quality Program Manager
Bell Helicopter Textron
817-280-4752

Attachments:
TR918 Experimental Airworthiness Certificate
TR918 Experimental Operating Limitations

cc: Charles Shepard, XworX UAS Program Manager

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION EXPERIMENTAL (UNMANNED AIRCRAFT)	
	PURPOSE Research & Development and/or Crew Training	
B	MANUFACTURER	NAME N/A
		ADDRESS N/A
C	FLIGHT	FROM N/A
		TO N/A
D	N- 5916A	SERIAL NO 91801
	BUILDER Bell Helicopter Textron, Inc.	MODEL TR918
E	DATE OF ISSUANCE Dec 1, 2005 EXPIRY December 1, 2006	
	OPERATING LIMITATIONS DATED Dec 01, 2005 ARE A PART OF THIS CERTIFICATE	
	SIGNATURE OF FAA REPRESENTATIVE FIDEL T. BALLESTEROS	DESIGNATION OR OFFICE NO. SW MIDO-42

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

A	This airworthiness certificate is issued under the authority of the Federal Aviation Act of 1958 and the Federal Aviation Regulations (FAR).
B	This airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production flight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire; and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable FAR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable FAR and in accordance with conditions and limitations which may be prescribed by the Administrator as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in FAR Part 21, Section 21.181 or 21.217.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Cancon

800 Independence Ave, S.W.
Washington, D.C. 20591

EXPERIMENTAL - OPERATING LIMITATIONS
RESEARCH AND DEVELOPMENT, and/or CREW TRAINING.

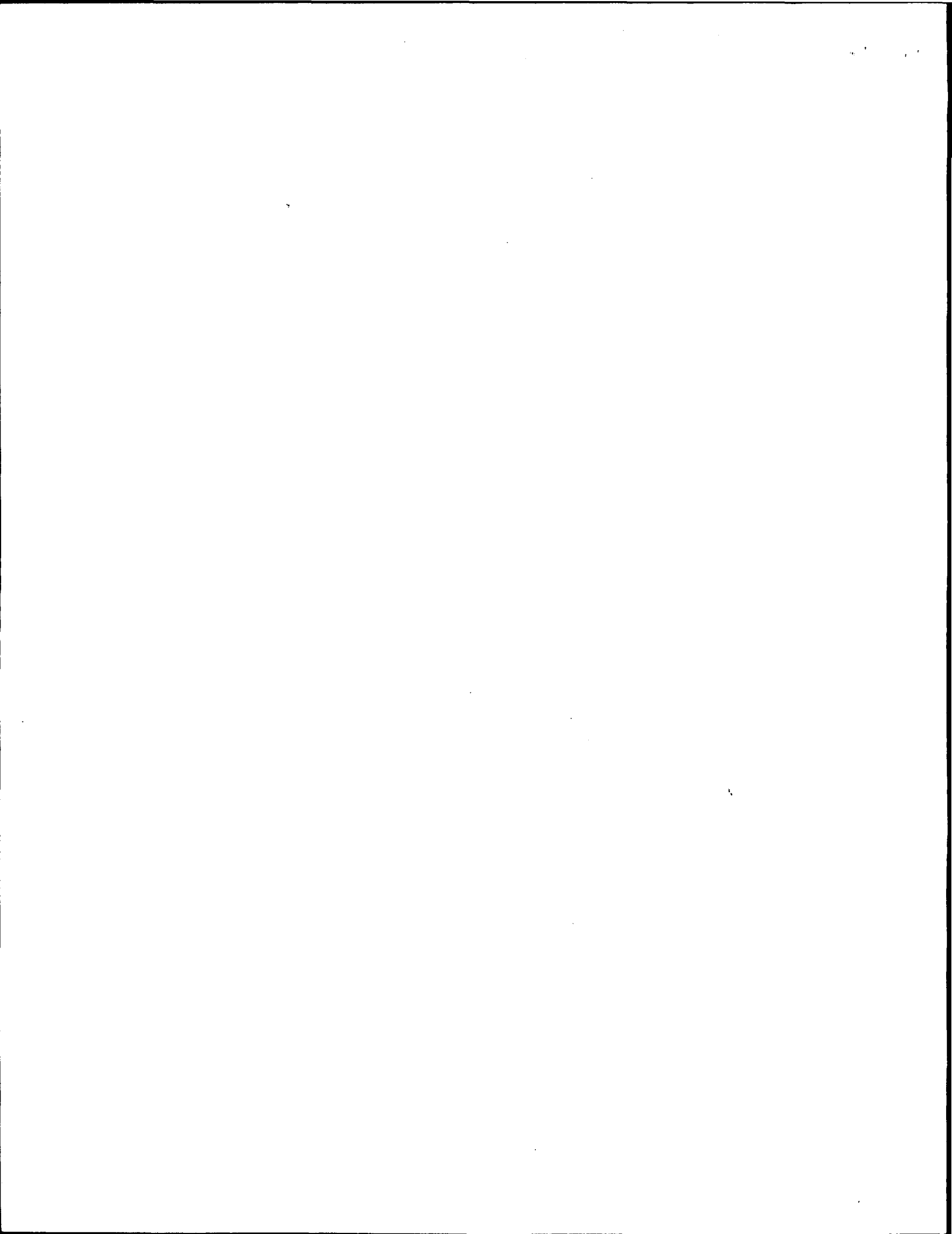
REGISTERED OWNER NAME: BELL HELICOPTER TEXTRON, INC.	AIRCRAFT BUILDER: BELL HELICOPTER TEXTRON, INC.
REGISTERED OWNER ADDRESS: 600 EAST HURST BLVD HURST, TX 76053-8030	YEAR MANUFACTURED: 2005
AIRCRAFT DESCRIPTION: TILT ROTOR	AIRCRAFT SERIAL NUMBER: 91801
AIRCRAFT REGISTRATION: N5916A	AIRCRAFT MODEL DESIGNATION: TR918 RISK REDUCTION PROTOTYPE
	ENGINE MODEL: PRATT AND WHITNEY XPW207D

The following conditions and limitations apply to all Bell Helicopter Textron, INC., (BHTI) TR918 Risk Reduction Prototype (RRP), flight operations while operating in the National Airspace System (NAS):

1. GENERAL:

a. For the purposes of this **Special Airworthiness Certificate and Operating Limitations**, the TR918 RRP Unmanned Aircraft System (UAS), owned and operated by BHTI, is considered to be an integrated system that is composed of the TR918 RRP aircraft, SN: 91801, unmanned aircraft (UA) pilot(s), UA control station(s) (fixed or mobile), telemetry, navigation and communications equipment to include ground, air, equipment that is used for control of the TR918 RRP UA. The UAS also includes equipment on the ground and in the air that is used for communication with the chase aircraft and Air Traffic.

b. Unless otherwise specified in this document, the UA Pilot-in-Command (PIC) and BHTI shall comply with all applicable sections and parts of 14 CFR including, but not limited to, parts 61 and 91.



c. No person may operate this UA for other than the purpose of Research and Development, and/or Crew Training, to accomplish the flight operation outlined in BHTI Program Letter dated December 1, 2005, which describes compliance with § 21.193(d), and has been made available to the pilot in command of the UA. In addition, this UA must be operated in accordance with applicable air traffic and general operating rules of part 91, and all additional limitations herein prescribed under the provisions of § 91.319(e).

d. The UA PIC must determine that the UA is in a condition for safe operation, and in a configuration appropriate for the purpose of the intended flight.

e. No person may operate this UA to carry property for compensation or hire.

f. This UA must be marked with its U.S. Registration number in accordance with 14 CFR part 45.

g. This UA must display the word "EXPERIMENTAL" in accordance with § 45.23(b).

h. Prior to conducting the initial TR918 flight operations, BHTI must forward a copy of the TR918 Program Letter, Special Airworthiness Certificate, and Operating Limitations to the FAA Central En Route Service Area, Operations Branch CJE-530.4. The documents should be sent to the attention of Mr. Roger Trevino, Airspace Specialist, at email roger.trevino@faa.gov, or via fax at 817-222-5547.

i. Section 47.45 requires that the FAA Aircraft Registry must be notified within 30 days of any change in the aircraft registrant's address. Such notification is to be made by submitting AC Form 8050-1 to AFS-750 in Oklahoma City, Oklahoma.

2. PROGRAM LETTER: The BHTI TR918 Program Letter, dated December 1, 2005, shall be used as a basis for the determination of the operating limitations prescribed in this document. All flight operations must be conducted in accordance with the provisions of this document.

3. AUTHORIZED FLIGHT OPERATIONS AREA:

a. The base of operations for the UA shall be Wrangler Field, south of Graford, TX.

b. All flight operations shall be conducted during daylight hours under Visual Flight Rules (VFR). The flight operations area authorized for the UA is depicted graphically below. This area shall be referred to as the "Flight Test Area."

c. Flight operations in the Flight Test Area shall be conducted at or below 5,000 feet MSL within the boundaries defined below. The Flight Test Area excludes the 2 nautical mile radius around the Boy Scout Camp during those times when principal activities are ongoing, and by prior coordination with camp personnel.

d. The boundary of the Flight Test Area is defined by the following coordinates:

1. N 32.9092 W 98.2433
2. N 32.8831 W 98.2107
3. N 32.8043 W 98.2273
4. N 32.7819 W 98.3210
5. N 32.7609 W 98.3677
6. N 32.7627 W 98.4354
7. N 32.7819 W 98.4524
8. N 32.8607 W 98.3671
9. N 32.9092 W 98.3671
10. N 32.9092 W 98.2433

Boy Scout Camp:

N 32.8176 W 98.3260

Amended

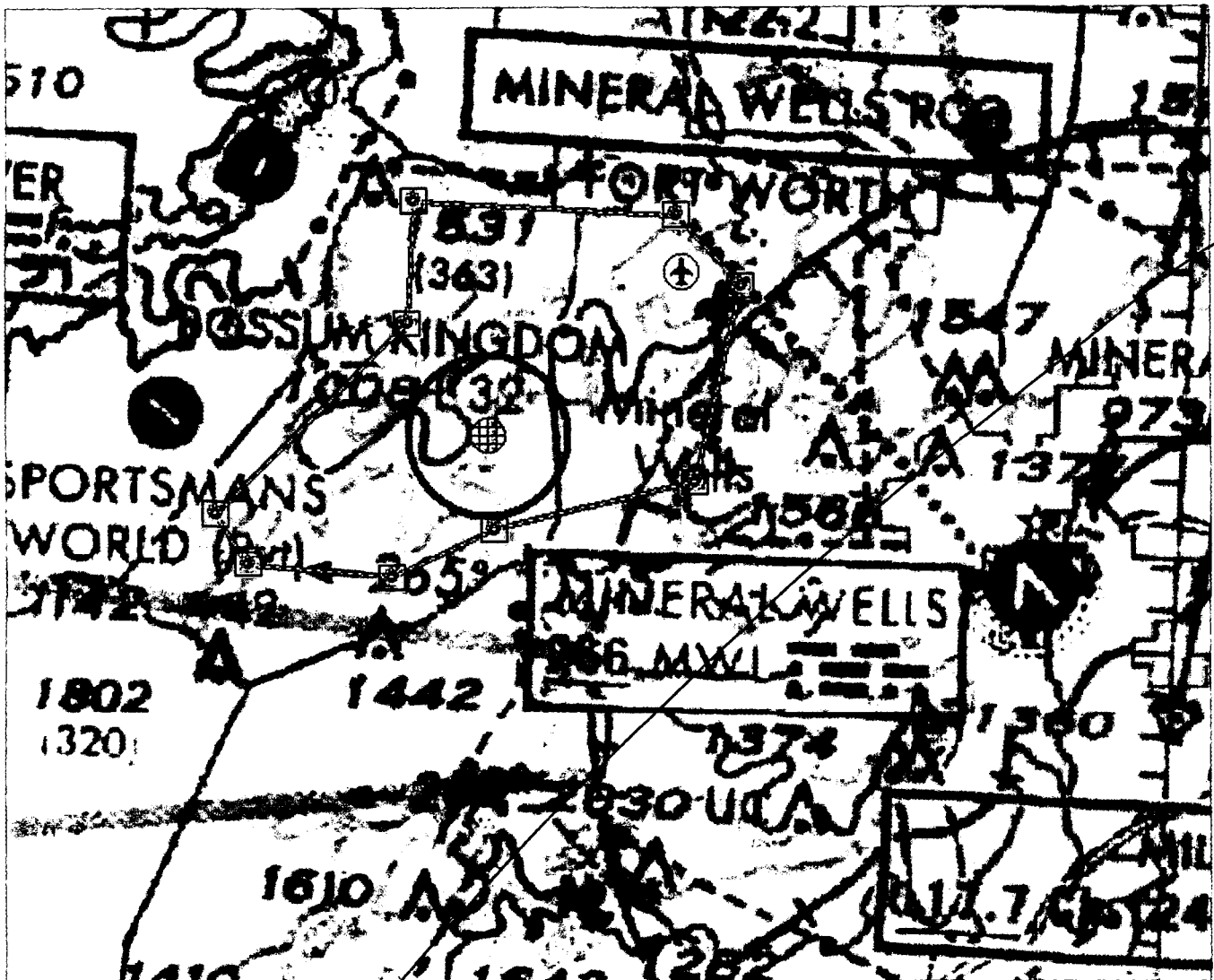


Figure 2: Flight Test Area (WAC Depiction)

- e. The UA PIC shall ensure that all UA flight operations remain within the lateral and vertical boundaries of the Flight Test Area. Furthermore, the UA PIC shall take into account all factors that may affect the capability of remaining within the Flight Test Area. This includes, but is not limited to, considerations for wind, gross weight, and glide distances.**
- f. Any flight operation that transgresses the lateral or vertical boundaries of the Flight Test Area shall be immediately concluded, and Air Traffic Control notified of the flight status. BHTI shall, at the conclusion of the flight, immediately notify the Manager of the Flight Technology Requirements Branch, AFS-430, of any flight operation that transgresses the lateral or vertical boundaries of the Flight Test Areas. AFS-430 can be reached at telephone number 202-385-4622, or by fax at 202-385-4653.**

g. Further flight operations shall not be conducted until the incident is reviewed by AFS-430, and authorization to resume operations is received.

4. UA PILOTS and OBSERVERS:

a. All flight operations shall have a designated UA Pilot-In-Command (PIC). Any additional UA pilot(s) assigned to a crew station during UA flight operations shall be considered a Supplemental UA Pilot. The UA PIC shall have responsibility over each flight conducted and be held accountable for the UA flight operation.

b. The UA PIC is responsible for the safety of the UA as well as persons and property along the UA flight path. This includes, but is not limited to, collision avoidance and the safety of persons and property in the air and on the ground. The UA PIC shall avoid densely populated areas (§ 91.319) and exercise increased vigilance when operating within or in the vicinity of published airway boundaries.

c. The UA PIC shall hold, at a minimum, an FAA Private Pilot certificate, with either an Airplane or Rotorcraft category, Single or Multiengine class ratings, or military equivalent, and have it in his/her possession.

d. The Supplemental UA Pilot need not be a certificated pilot, but must have successfully completed a recognized Private Pilot ground school.

e. The UA PIC shall have operational override capability over any Supplemental UA Pilot(s), regardless of position.

f. The UA PIC shall maintain currency in manned aircraft in accordance with § 61.57.

g. The UA PIC shall have a Flight Review in manned aircraft every 24 calendar months in accordance with § 61.56.

h. All UA Pilots shall maintain currency in unmanned aircraft in accordance with BHTI company procedures.

i. All UA pilots shall have a Flight Review in unmanned aircraft every 24 calendar months in accordance with BHTI company procedures.

j. All flight operations conducted in the Flight Test Area shall have an Observer to perform traffic avoidance and visual observation to fulfill the "see and avoid" requirement of § 91.113.

k. All Observers shall:

1. Hold at a minimum, an FAA Private Pilot certificate or military equivalent. An Observer does not require currency as a pilot; or,

2. In lieu of a Pilot certificate, have successfully completed specific Observer training acceptable to the FAA.

l. All UA Pilots and Observers shall have successfully completed applicable BHTI training for the UAS.

m. The UA PIC and Observer(s) must have in their possession a valid third class (or higher) airman medical certificate that has been issued under 14 CFR part 67.

n. UA Pilots and Observers shall perform crew duties for only one UA at a time. When the observer is located in a chase aircraft, the Observer's duties shall be dedicated to the task of observation only. Concurrent duty as pilot is not authorized.

o. All Observers must be thoroughly trained, familiar with, and possess, operational experience with the equipment being utilized for observation and detection of other aircraft for collision avoidance purposes as outlined in BHTI TR918 Program Letter.

p. Observer Responsibilities: The task of the Observer is to provide the UA pilot(s) with instructions to maneuver the UA clear of any potential collision with other traffic. Observer duties require continuous visual contact with the UA at all times in such a manner as to be able to discern UA attitude and trajectory in relation to conflicting traffic. To satisfy these requirements:

1. At no time shall the Observer permit the UA to operate beyond line-of-sight necessary to ensure that maneuvering information can be reliably determined.
2. At no time shall Observers conduct their duties more than one (1) statute mile laterally or 3000 feet vertically from the UA.
3. Observers must maintain continuous visual contact with the UA.
4. Observers may be positioned in a chase aircraft. When a chase aircraft is utilized, it must maintain a reasonable proximity, and shall position itself relative to the UA in such a manner as to reduce the hazard of collision in accordance with § 91.111.

5. COMMUNICATIONS:

a. Two hours prior to each UAS Flight, BHTI must contact the Fort Worth Air Route Traffic Control Center (ARTCC), Milsap Low Sector, at (817) 858-7525, to obtain a transponder code. Upon initial contact with Air Traffic, the UA PIC must indicate the experimental nature in accordance with § 91.319.

b. Appropriate Air Traffic frequencies shall be monitored during flight operations.

c. All UAS positions must maintain two-way communications with each other during all operations. If unable to maintain two-way communication, the UA will be expeditiously returned to its base of operations while remaining within the Flight Test Area, and conclude the flight operation.

d. Spectrum used for operation and control of the UA must be approved by the Federal Communications Commission or other appropriate government oversight agency prior to operations being conducted.

6. FLIGHT CONDITIONS:

a. All flight operations must be conducted during daylight hours in visual meteorological conditions (VMC), including cloud clearance minimums as specified in § 91.155. Flight operation in instrument meteorological conditions (IMC) is not permitted.

b. The UA is prohibited from aerobatic flight, that is, an intentional maneuver involving an abrupt change in the UA's attitude, an abnormal acceleration, or other flight action not necessary for normal flight (§ 91.303).

c. Flight operations must not involve carrying hazardous material or the dropping of any objects or external stores.

d. The UA and chase aircraft shall be equipped with operable strobe/anti-collision lights and shall be illuminated during operations.

e. The UA must be equipped with, and operate, an approved operational Mode C altitude encoding transponder during all flight operations.

f. The chase aircraft transponder must be on standby while performing chase operation flight with the UA. In the event of UA transponder failure, the chase aircraft will operate the transponder in Mode C.

g. In the event of transponder failure on either the UA or the chase aircraft, the UA must conclude all flight operations and expeditiously return to its base of operations within the prescribed limitations of this authorization.

h. BHTI must request the issuance of a Notice to Airman (NOTAM) through the Fort Worth Automated Flight Service Station at least twenty-four (24) hours prior to flight operation.

7. FLIGHT TERMINATION & LOST LINK PROCEDURES:

a. In accordance with BHTI Program Letter, dated December 1, 2005, flight termination must be initiated at any point that safe operation of the UA cannot be maintained.

b. In the event of lost link, the UA must provide a means of automatic recovery that ensures airborne operations are predictable and that the UA remains within the Flight Test Area. The chase aircraft/Observer will be immediately notified of the lost link condition and the expected UA response.

8. MAINTENANCE:

- a. This UAS must not be operated unless it is inspected and maintained in accordance with the BHTI Bell Model TR918 Pilot Ground and Flight Test Procedures, BHT-TR918-1-FM, Sections 7, 13, and 15, dated November 14, 2005. Each inspection must be recorded in the UAS maintenance records.
- b. No person may operate this UAS unless within the preceding 12 calendar months it has had a condition inspection performed in accordance with, FAA-approved, Bell Helicopter Textron, Inc., Inspection and Maintenance Program, and was found to be in a condition for safe operation. This inspection will be recorded in the UAS maintenance records.
- c. Only those individuals authorized by Bell Helicopter Textron, Inc., and acceptable to the FAA, may perform inspections required by these operating limitations.
- d. Inspections of the UAS must be recorded in the UAS maintenance records showing the following, or a similarly worded, statement: "I certify that this UAS has been inspected on [insert date] in accordance with the scope and detail of the Bell Helicopter Textron, Inc., Inspection and Maintenance Program, and was found to be in a condition for safe operation." The entry will include the UAS's total time-in-service, and the name and signature of the person performing the inspection.
- e. UAS instruments and equipment installed must be inspected and maintained in accordance with the requirements of the Bell Helicopter Textron, Inc., Inspection and Maintenance Program. Any maintenance or inspection of this equipment must be recorded in the UAS maintenance records.
- f. No person may operate this UAS unless the altimeter system and transponder have been tested within the preceding 24 calendar months in accordance with 14 CFR § 91.411 and § 91.413 respectively. These inspections will be recorded in the UAS maintenance records.

9. EQUIPAGE: The UAS shall be equipped with an operable transponder with Mode-C and two-way communications equipment allowing communications between the UA pilot, chase aircraft, and Air Traffic.

10. REVISIONS and OTHER PROVISIONS:

- a. The Experimental Certificate, Bell Helicopter Textron, Inc., FAA-accepted Program Letter, and operating limitations cannot be reissued, renewed, or revised without application being made to the Fort Worth Manufacturing Inspection District Office (MIDO), and coordinated with the Production and Airworthiness Division, AIR-200. AIR-200 will be responsible for headquarters internal coordination with the Aircraft Certification Service, Flight Standards Service, Air Traffic, Office of Chief Council, and Office of Rulemaking.

December 1, 2005

b. No Certificate of Authorization or Waiver may be issued in association with this Experimental Certificate unless coordinated with the Fort Worth MIDO and the Production and Airworthiness Division, AIR-200.

c. All revisions to BHTI FAA-approved Inspection and Maintenance Program, Sections 7, 13, and 15, of BHT-TR918-1-FM, must be reviewed and accepted by the Fort Worth Aircraft Evaluation Group (FTW-AEG). The AEG can be reached at telephone number is 817-222-5269.

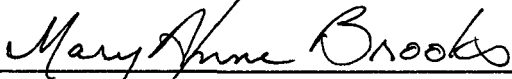


Fidel T. Ballesteros
Senior Aviation Safety Inspector
Fort Worth Manufacturing Inspection District Office
2601 Meacham Blvd.
Fort Worth, TX 76193

Date: December 1, 2005

I certify that I have read and understand the operating limitations, and conditions, that are a part of the Special Airworthiness Certificate; FAA Form 8130-7 issued on December 1, 2005, for the purpose of Research and Development and/or Crew Training.

This Special Airworthiness Certificate is issued for Bell Helicopter UA model "TR918 Risk Reduction Prototype," serial number 91801, registration number N5916A.



Applicant (signature)

Date: December 1, 2005

Name (Printed): Mary Anne Brooks

Title: Unmanned Aircraft Systems (UAS) Quality Program Manager

Company: Bell Helicopter Textron, Inc.



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UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION
SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION EXPERIMENTAL (UNMANNED AIRCRAFT)		
	PURPOSE Research & Development and/or Crew Training		
B	MANUFACTURER	NAME	N/A
		ADDRESS	N/A
C	FLIGHT	FROM	N/A
		TO	N/A
D	N— 5916A		SERIAL NO 91801
	BUILDER Bell Helicopter Textron, Inc.		MODEL TR918
E	DATE OF ISSUANCE Dec 1, 2005		EXPIRY December 1, 2006
	OPERATING LIMITATIONS DATED Dec 01, 2005 ARE A PART OF THIS CERTIFICATE		
	SIGNATURE OF FAA REPRESENTATIVE FIDEL T. BALLESTEROS		DESIGNATION OR OFFICE NO. SW MIDO-42

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

A	This airworthiness certificate is issued under the authority of the Federal Aviation Act of 1958 and the Federal Aviation Regulations (FAR).
B	This airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production flight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire; and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable FAR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable FAR and in accordance with conditions and limitations which may be prescribed by the Administrator as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in FAR Part 21, Section 21.181 or 21.217.

FAA FORM 8130-6, APPLICATION FOR U.S. AIRWORTHINESS CERTIFICATE

Form Approved
O.M.B. No. 2120-0018

 U.S. Department of Transportation Federal Aviation Administration		APPLICATION FOR U.S. AIRWORTHINESS CERTIFICATE		INSTRUCTIONS - Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use attachment. For special flight permits complete Sections II, VI and VII as applicable.																																																																																											
		1. REGISTRATION MARK N5916A	2. AIRCRAFT BUILDER'S NAME (Make) Bell Helicopter Textron, Inc	3. AIRCRAFT MODEL DESIGNATION TR918	4. YR. MFR. 2005	5. AIRCRAFT SERIAL NO. 91801																																																																																									
		6. ENGINE BUILDER'S NAME (Make) Pratt & Whitney Canada	7. ENGINE MODEL DESIGNATION XPW207D	8. NUMBER OF ENGINES 1		9. PROPELLER BUILDER'S NAME (Make) N/A																																																																																									
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D. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above, that the aircraft is registered with the Federal Aviation Administration in accordance with Title 49 of the United States Code 44101 et seq. and applicable Federal Aviation Regulations, and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested.																																																																																															
E. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															
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S. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															
T. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															
U. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															
V. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															
W. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															
X. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															
Y. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															
Z. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies.																																																																																															

VI. PRODUCTION FLIGHT TESTING	A. MANUFACTURER			
	NAME		ADDRESS	
	B. PRODUCTION BASIS <i>(Check applicable item)</i>			
			PRODUCTION CERTIFICATE <i>(Give production certificate number)</i> _____	
			TYPE CERTIFICATE ONLY	
		APPROVED PRODUCTION INSPECTION SYSTEM		
C. GIVE QUANTITY OF CERTIFICATES REQUIRED FOR OPERATING NEEDS				
		DATE OF APPLICATION		NAME AND TITLE <i>(Print or Type)</i>
				SIGNATURE

VII. SPECIAL FLIGHT PERMIT PURPOSES OTHER THAN PRODUCTION FLIGHT TEST	A. DESCRIPTION OF AIRCRAFT				
	REGISTERED OWNER		ADDRESS		
	BUILDER <i>(Make)</i>		MODEL		
	SERIAL NUMBER		REGISTRATION MARK		
	B. DESCRIPTION OF FLIGHT				
	FROM		TO		
	VIA		DEPARTURE DATE		
			DURATION		
	C. CREW REQUIRED TO OPERATE THE AIRCRAFT AND ITS EQUIPMENT				
		PILOT	CO-PILOT	FLIGHT ENGINEER	OTHER <i>(Specify)</i>
	D. THE AIRCRAFT DOES NOT MEET THE APPLICABLE AIRWORTHINESS REQUIREMENTS AS FOLLOWS:				
	E. THE FOLLOWING RESTRICTIONS ARE CONSIDERED NECESSARY FOR SAFE OPERATION: <i>(Use attachment if necessary)</i>				
F. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above; that the aircraft is registered with the Federal Aviation Administration in accordance with Title 49 of the United States Code 44101 <u>et seq.</u> and applicable Federal Aviation Regulations; and that the aircraft has been inspected and is safe for the flight described.					
		DATE		NAME AND TITLE <i>(Print or Type)</i>	
				SIGNATURE	

VIII. AIRWORTHINESS DOCUMENTATION <small>(FAA DESIGNEE use only)</small>		A. Operating Limitations and Markings in Compliance with 14 CFR Section 91.9, as applicable.	G. Statement of Conformity, FAA Form 8130-9 <i>(Attach when required)</i>
	<input checked="" type="checkbox"/>	B. Current Operating Limitations Attached	H. Foreign Airworthiness Certification for Import Aircraft <i>(Attach when required)</i>
	<input checked="" type="checkbox"/>	C. Data, Drawings, Photographs, etc. <i>(Attach when required)</i>	I. Previous Airworthiness Certificate Issued in Accordance with 14 CFR Section _____ CAR _____ <i>(Original Attached)</i>
	<input checked="" type="checkbox"/>	D. Current Weight and Balance Information Available in Aircraft	J. Current Airworthiness Certificate Issued in Accordance with 14 CFR Section <u>21.191(b) & (c)</u> <i>(Copy Attached)</i>
	<input type="checkbox"/>	E. Major Repair and Alteration, FAA Form 337 <i>(Attach when required)</i>	K. Light-Sport Aircraft Statement of Compliance, FAA Form 8130-15 <i>(Attach when required)</i>
	<input checked="" type="checkbox"/>	F. This inspection Recorded in Aircraft Records	



U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave, S.W.
Washington, D.C. 20591

Copy

EXPERIMENTAL - OPERATING LIMITATIONS
RESEARCH AND DEVELOPMENT, and/or CREW TRAINING.

REGISTERED OWNER NAME: BELL HELICOPTER TEXTRON, INC.	AIRCRAFT BUILDER: BELL HELICOPTER TEXTRON, INC.
REGISTERED OWNER ADDRESS: 600 EAST HURST BLVD HURST, TX 76053-8030	YEAR MANUFACTURED: 2005
AIRCRAFT DESCRIPTION: TILT ROTOR	AIRCRAFT SERIAL NUMBER: 91801
AIRCRAFT REGISTRATION: N5916A	AIRCRAFT MODEL DESIGNATION: TR918 RISK REDUCTION PROTOTYPE
	ENGINE MODEL: PRATT AND WHITNEY XPW207D

The following conditions and limitations apply to all Bell Helicopter Textron, INC., (BHTI) TR918 Risk Reduction Prototype (RRP), flight operations while operating in the National Airspace System (NAS):

1. GENERAL:

a. For the purposes of this **Special Airworthiness Certificate and Operating Limitations**, the TR918 RRP Unmanned Aircraft System (UAS), owned and operated by BHTI, is considered to be an integrated system that is composed of the TR918 RRP aircraft, S/N: 91801, unmanned aircraft (UA) pilot(s), UA control station(s) (fixed or mobile), telemetry, navigation and communications equipment to include ground, air, equipment that is used for control of the TR918 RRP UA. The UAS also includes equipment on the ground and in the air that is used for communication with the chase aircraft and Air Traffic.

b. Unless otherwise specified in this document, the UA Pilot-in-Command (PIC) and BHTI shall comply with all applicable sections and parts of 14 CFR including, but not limited to, parts 61 and 91.

- c. No person may operate this UA for other than the purpose of Research and Development, and/or Crew Training, to accomplish the flight operation outlined in BHTI Program Letter dated December 1, 2005, which describes compliance with § 21.193(d), and has been made available to the pilot in command of the UA. In addition, this UA must be operated in accordance with applicable air traffic and general operating rules of part 91, and all additional limitations herein prescribed under the provisions of § 91.319(e).
- d. The UA PIC must determine that the UA is in a condition for safe operation, and in a configuration appropriate for the purpose of the intended flight.
- e. No person may operate this UA to carry property for compensation or hire.
- f. This UA must be marked with its U.S. Registration number in accordance with 14 CFR part 45.
- g. This UA must display the word "EXPERIMENTAL" in accordance with § 45.23(b).
- h. Prior to conducting the initial TR918 flight operations, BHTI must forward a copy of the TR918 Program Letter, Special Airworthiness Certificate, and Operating Limitations to the FAA Central En Route Service Area, Operations Branch CJE-530.4. The documents should be sent to the attention of Mr. Roger Trevino, Airspace Specialist, at email roger.trevino@faa.gov, or via fax at 817-222-5547.
- i. Section 47.45 requires that the FAA Aircraft Registry must be notified within 30 days of any change in the aircraft registrant's address. Such notification is to be made by submitting AC Form 8050-1 to AFS-750 in Oklahoma City, Oklahoma.

2. PROGRAM LETTER: The BHTI TR918 Program Letter, dated December 1, 2005, shall be used as a basis for the determination of the operating limitations prescribed in this document. All flight operations must be conducted in accordance with the provisions of this document.

3. AUTHORIZED FLIGHT OPERATIONS AREA:

- a. The base of operations for the UA shall be Wrangler Field, south of Graford, TX.
- b. All flight operations shall be conducted during daylight hours under Visual Flight Rules (VFR). The flight operations area authorized for the UA is depicted graphically below. This area shall be referred to as the "Flight Test Area."
- c. Flight operations in the Flight Test Area shall be conducted at or below 5,000 feet MSL within the boundaries defined below. The Flight Test Area excludes the 2 nautical mile radius around the Boy Scout Camp during those times when principal activities are ongoing, and by prior coordination with camp personnel.

d. The boundary of the Flight Test Area is defined by the following coordinates:

- | | | |
|-----|-----------|-----------|
| 1. | N 32.9092 | W 98.2433 |
| 2. | N 32.8831 | W 98.2107 |
| 3. | N 32.8043 | W 98.2273 |
| 4. | N 32.7819 | W 98.3210 |
| 5. | N 32.7609 | W 98.3677 |
| 6. | N 32.7627 | W 98.4354 |
| 7. | N 32.7819 | W 98.4524 |
| 8. | N 32.8607 | W 98.3671 |
| 9. | N 32.9092 | W 98.3671 |
| 10. | N 32.9092 | W 98.2433 |

Boy Scout Camp:

N 32.8176 W 98.3260

Tiltrotor UAV
Weight and Balance Calculations

Model: **TR918** Target GW:
Serial Number: **91801** Longitudinal CG:
Weigh Date: **2-Nov-05** Lateral CG:
Test No. Date:

Flight Test Engineer: Colby Nicks
Pilot:

Program:
Remarks: **Weighing Configuration:**

Item	Weight (lbs)	Longitudinal Loading		Lateral Loading	
		Arm (in)	Moment (in-lbs)	Arm (in)	Moment (in-lbs)
Fwd Left Jackpoint	905.00	87.60	79278.00	-71.40	-64617.00
Fwd Right Jackpoint	870.00	87.60	76212.00	71.40	62118.00
Aft Right Jackpoint	375.00	155.60	58350.00	5.00	1875.00
Fuel Tare @ Weighing	0.00	0.00	0.00	0.00	0.00
As Weighed	2150.00	99.46	213840.00	-0.29	-624.00
Pilot UAV	0.00	0.00	0.00	0.00	0.00
Copilot/FTE UAV	0.00	0.00	0.00	0.00	0.00
Target Fuel	0.00	0.00	0.00	0.00	0.00
Remove Left Wing Jackpoint	-25.50	99.00	-2524.50	-71.40	1820.70
Remove Right Wing Jackpoint	-25.50	99.00	-2524.50	71.40	-1820.70
Remove Lft Aft Wedge Lift point	-1.20	146.00	-175.20	-16.00	19.20
Remove Right Aft Wedge Liftpoint	-1.20	146.00	-175.20	16.00	-19.20
Add Eng Heat Shield	4.20	146.00	613.20	0.00	0.00
Add Access Cover	0.20	162.00	32.40	12.00	2.40
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Ballast	0.00	0.00	0.00	0.00	0.00
Total	2101.00	99.52	209086.20	-0.30	-621.60

See Page 2 for Fuel Burn and Data Range

Tiltrotor UAV
Weight and Balance Calculations
Fuel Burn Data & Data Range

Page 2 of 2

Model:	TR918	Target GW:	lbs.
Serial Number:	91801	Longitudinal CG:	in.
Date:	0	Lateral CG:	in.
Test No.	0	w/ Target Fuel:	lbs.

<u>Data Range:</u>	
Target GW + :	3 %
Target GW - :	2 %

<u>Fuel Burn Curve:</u>	<u>Fuel</u>	<u>Aircraft GW</u>	<u>Longitudinal CG</u>	<u>Lateral CG</u>
Actual weighing results (prior Test 53)	(lbs)	(lbs)	(in)	(in)
	623	2724	100.31	-0.23
	623	2724	100.31	-0.23
	623	2724	100.31	-0.23
	623	2724	100.31	-0.23
	600	2701	100.32	-0.23
	550	2651	100.32	-0.23
	500	2601	100.29	-0.24
	450	2551	100.25	-0.24
	400	2501	100.18	-0.25
	350	2451	100.05	-0.25
	300	2401	99.93	-0.26
	250	2351	99.80	-0.26
	200	2301	99.68	-0.27
	150	2251	99.56	-0.28
	100	2201	99.47	-0.28
Start Data	50	2151	99.44	-0.29
End Data	0	2101	99.52	-0.30

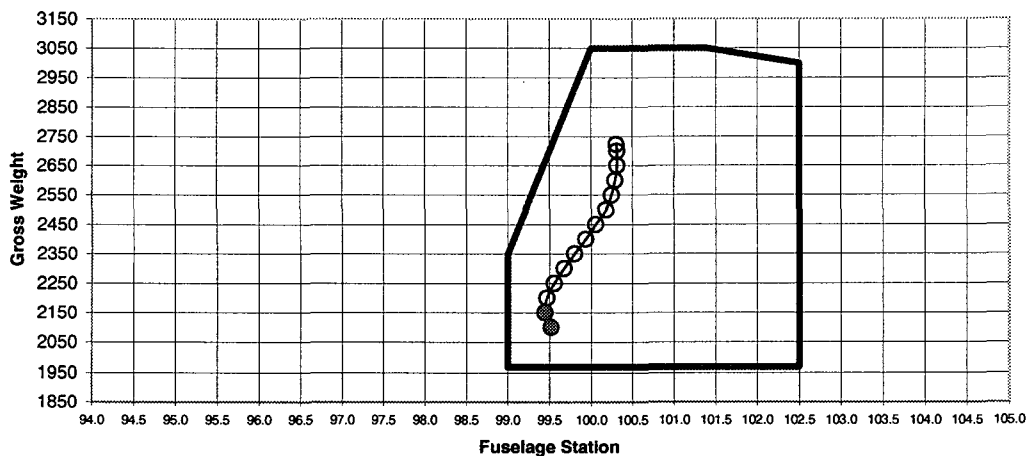
RRP918 UAS**Weight & Balance Calculations**A/C Serial No.: **91801**Test No.: **0****Data Range:****Target**

Gross Wt.: 0 lbs.
 Long. CG: 0.0 in.
 Lat. CG: 0.0 in.
 w/ Target Fuel: 0 lbs.

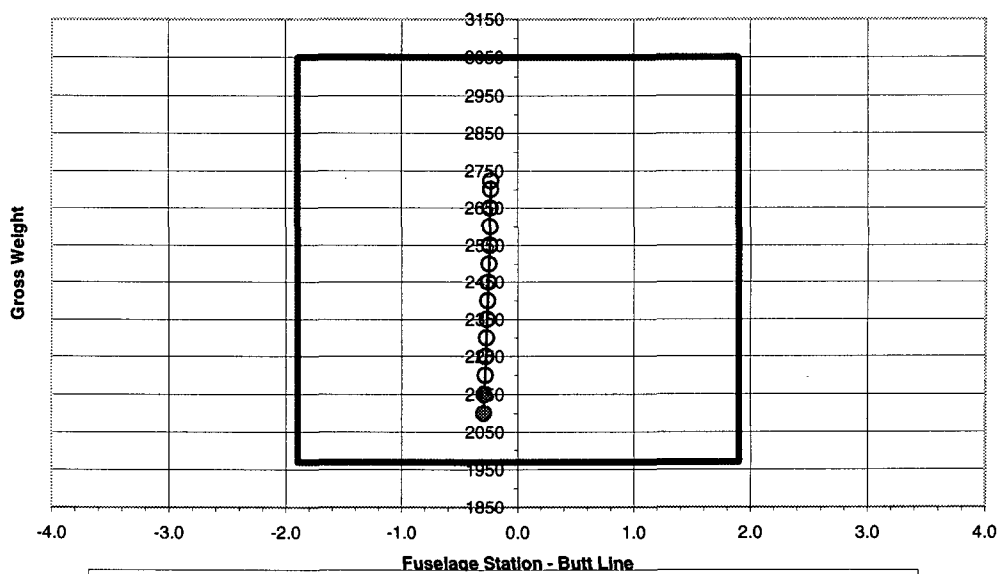
Range:

Target GW + : 3 %
 Start Data GW: 2101 lbs.
 w/ Fuel: 0 lbs.

Target GW - : 2 %
 End Data GW: 2101 lbs.
 w/ Fuel: 0 lbs.

Longitudinal CG and Fuel Burn

— Projected Envelope — Flight Tested Env. - - - Restricted Envelope
 —○— Fuel Burn ● Data Range

Lateral CG & Fuel Burn

— Projected Envelope — Flight Tested Envelope —○— Fuel Burn ● Data Range

522052

AIRCRAFT MODEL

SERIAL NO.

REGISTRATION NO.

OWNER

TR918

91801

N5916A

BHTI

PILOT	DATE	TYPE OF FLIGHT	ACFT. HRS.	ENG. STARTS ENG. 1 ENG. 2	TORQUE EVENTS	LANDINGS	POWER ASSURANCE	ENG. 1	ENG. 2
			.				TORQUE		
			.				TOT/ITT		
			.				N1		
			.				N2		
			.				OAT		
TOTAL FOR THE DAY:			.				PA.		

AIRCRAFT & ENGINE FLIGHT HRS / CYCLES / RIN	AIRCRAFT HOURS	ENG. HOURS ENG. 1 ENG. 2	ENG. CYCLES ENG. 1 ENG. 2	TORQUE EVENTS	LANDINGS	I CERTIFY THAT THE DAILY INSPECTION WAS COMPLETED ACCORDING TO THE MAINTENANCE MANUAL.
TOTALS BROUGHT FORWARD:	0.0	507.1	.	1079	0	
TOTALS FOR TODAY:	.	.	.			
ACCUMULATIVE TOTAL:	.	.	.			

NEXT
INSPECTION

I CERTIFY THIS ACFT. S/N 91801, REG. N5916A THE FOLLOWING WAS ACCOMPLISHED @ 0.0 AIRFRAME, 507.1 ENGINE HRS, 1079 CYCLES, 00 T/EVENTS.

ATE NO.

TYPE
(50, 1)ANN
DUE

1. 12 MONTH ENGINE INSPECTION PER CHAPTER 05-20-00 P&W 207D
2. PERFORMED 24 MONTH TRANSPONDER TEST & INSPECTION PER FAR 91.413 I/A/W FAR 43 APPENDIX F
3. PERFORMED 24 MONTH ALTIMETER TEST & INSPECTION PER FAR 91.411 I/A/W FAR 43 APPENDIX E & F
4. AIRCRAFT ENGINE PERFORMANCE CHECK WAS COMPLIED WITH AT MANUFACTURER; REFERENCE OVERHAUL TEST RECORD DATED JANUARY 30, 2004.
5. AD 2004-14-22 / P&W ASB A28252 REV.3 CONFIRMATION OF DATA COLLECTION UNIT (DCU) PROPERLY COLLECTING ENGINE LOW-CYCLE-FATIGUE (LCF) DATA, AND CONFIRMATION OF ENGINE LCF COUNT VALUES. PREVIOUSLY COMPLIED WITH BY PRATT & WHITNEY CUSTOMER SUPPORT REP. REF: ASB A28252 SIGN OFF IN ENGINE LOG BOOK DATED NOVEMBER 21, 2005

FLI
DIS

1

THIS AIRCRAFT COMPLIES WITH ALL APPLICABLE AIRWORTHINESS DIRECTIVES THROUGH FAA BIWEEKLY SUPPLEMENT ISSUE 2005-24.

COF

Wesley O. Mitchell Date DEC. 1, 2005
WESLEY O. MITCHELL

2

FOR BELL HELICOPTER TEXTRON INC.
600 E. HURST BLVD. HURST, TEXAS 76053

COF

I CERTIFY THIS ACFT. S/N 91801, REG. N5916A, EQUIPMENT AND SYSTEMS HAS BEEN INSPECTED IN ACCORDANCE WITH THE SCOPE AND DETAIL OF SECTION 7 OF THE BELL MODEL TR918 PILOT GROUND AND FLIGHT PROCEDURE MANUAL REV. 3 DATED NOVEMBER 8, 2005 AND FOUND TO BE IN A CONDITION FOR SAFE OPERATION.

3

COF

Wesley O. Mitchell Date DEC. 1, 2005
WESLEY O. MITCHELL
FOR BELL HELICOPTER TEXTRON INC.
600 E. HURST BLVD. HURST, TEXAS 76053

4

CORRECTIVE
ACTION

5

CORRECTIVE
ACTION

HELICOPTER LOG

